A library is a collection of books kept for use.
— S.R. Ranganathan, 1931

It’s hard to imagine a more concise definition of a library than this one, given by the Indian mathematician and librarian S.R. Ranganathan (1892–1972) in *The Five Laws of Library Science* (Madras Library Association, 1931). This principle statement appears simple, almost reductive — yet, it bears the kernel through which all other aspects of his writing are organized. Ranganathan’s precise definition practically demonstrates the library’s essential structure animated by its readership. To think about libraries is to think about thought and how to best provide hospitality through the design of the space, furnishings, ease of information retrieval and the advocacy of access. This mixture of practical prescription and broad gesture is expressed in Ranganathan’s Five Laws of Library Science.

1. BOOKS ARE FOR USE.
2. EVERY READER HIS [OR HER] BOOK.
3. EVERY BOOK ITS READER.
4. SAVE THE TIME OF THE USER.
5. THE LIBRARY IS A GROWING ORGANISM.

The assertion that BOOKS ARE FOR USE formed the basis of Ranganathan’s work as a library advocate and reformer — discerning the new practice of librarianship while working to create and maintain the first lending library systems in India. The comprehensive description of his first law includes the extension of library hours, ideal heights of shelving, proper tables and chairs, disposition of the library staff, the choice of the library location in the context of a city plan and the development of training programs for library workers.

No rack should be higher than what can be comfortably reached by a person of average height while
standing on the bare floor . . . A librarian is happy only when his shelves are constantly empty. \textit{(The Five Laws of Library Science)}

The next three rules are really subsets of the first — delineating the structures necessary for public access to materials, the importance of cataloging and reference tools for the retrieval of materials and the mandate for acquisitions in relevant subject matter. There are long passages describing proper shelf labeling and card catalog maintenance to insure that library patrons have appropriate guidance. In these details, the librarian is projected as part scholar, part psychologist and part civil servant.

To be successful in this task, the librarian must be a psychologist . . . So also every person on the Library staff, who gets innumerable opportunities to observe people, should acquire by practice, a working knowledge of psychology and the ability to understand human nature. \textit{(The Five Laws of Library Science)}

The final law — THE LIBRARY IS A LIVING ORGANISM — expresses another aspect of his thought and provides useful context for his writing on library classification systems. In affirming a condition of change in the organization of library functions, Ranganathan addressed the potentiality of thought in relation to the creation of new forms and areas of knowledge. As a cultural phenomenon, classification often evokes the conceptual relation to a fixed order based on fixed identity and taxonomic formulas. Ranganathan’s classification project complicates this assumption by affirming the essential dynamism of a library and its books.

The Colon Classification system that Ranganathan proposed was a faceted scheme. \textit{(Colon Classification simply}
refers to the use of a colon to separate facets in the call number.) Facets are conceptual categories or aspects, subject classes that can be compounded together so as fully form a proper description of the contents of a specific object.

1: BOOKS ARE FOR USE.
1:1 EVERY READER HIS [OR HER] BOOK.
1:2 EVERY BOOK ITS READER.
1:3 SAVE THE TIME OF THE USER.

2: THE LIBRARY IS A GROWING ORGANISM.

In the description of classification schemes, faceted systems are described as *analytico-synthetic*. Colon Classification is credited as the first attempt at a wholly analytico-synthetic scheme. In its function, Ranganathan demonstrated this compound by showing *analysis* as the process of aligning subjects with their elemental concepts understood as facets and *synthesis* as the process of recombining these facets to express the relationships. In a faceted classification, several subjects can be linked in a series so as to expressively describe the various subjects present in a single work. The classification begins with the specific object, or “thought mass,” and works inductively through a conceptual parsing of the contents of the work. In this broad sense, the classification work of Ranganathan primarily hinged on relationships between concepts as opposed to a hierarchical delineation of these relationships.

Classification emphasizes that the field of knowledge is infinite. What is known at any moment may be finite. What is yet to be known is always infinite. Transfers take place every moment from the unknown to the known. They have now begun to take place in a very crowded way. All new arrivals have to be accommodated among the old arrivals in a helpful,
filial way, and not at all in an arbitrary way.  
("Classification, Coding and the Machinery for Search,"  

A good introduction to facets is given in an anecdote  
from Ranganathan’s original publication on Colon Classifi-
cation. As a visiting student in London in the 1920s, he  
witnessed a presentation by a salesperson of a Meccano toy  
set (the British precursor to the US equivalent Erector set)  
at Selfridges in London. In the mechanical model kit, Ran-
ganathan found an anecdotal corollary to his own thinking  
about classification. The standard parts of the model kit po-
tentially expressed a multiplicity of forms, afforded by the  
flexibility of the materials and the innovation of the user. In  
this way, his faceted scheme hinged on the arrangement and  
interrelation of basic categories, but at the same time, neces-
sitiated a method that permitted the expansion and constant  
rearticulating of the relationships of these concepts.

For his Colon Classification, five basic components were  
elimited: PERSONALITY, MATTER, ENERGY, SPACE  
and TIME. These facets were envisioned as the necessary  
nuts, bolts, strips, and gears of the erector set, and the de-
termination and interpretation of the forms were placed back  
in the domain of the classifier. In these primary facets, Ran-
ganathan attempted to establish the working aspects inher-
ent in the “thought mass” and suggested, like the toy sets,  
a coherent form could be constructed from these basic ele-
ments. The distinction here from other decimal systems is  
that the language of classification takes on a more expansive  
topology by compounding sets of decimal fractions. Instead  
of signifying one linear dimension of decimal fractions, Ran-
ganathan understood the multi-faceted class number to pro-
duce a signification of multiply connected dimensions. In this  
dense formulation, his early mathematical training inflected
the articulation of the spatial architecture of his classification system. The composite call number as a cipher of thought becomes a unique location in this space.

The most important contribution of Colon Classification is the use of faceted notation to represent the existents of a multiply-infinite universe. In this notation, corresponding to each dimension in the universe of discourse, there is a zone in the class number . . . . Of course, it may be stated here that the need for transferring the multi-dimensional field of knowledge into a uni-directional, uni-dimensional field of classification arose out of the need for arranging physical entities called books into which cells of fields of knowledge get embodied. At the present stage of human evolution, man is more at home in linear space than multidimensional space. He prefers arranging books linearly . . . Is it that he will continue to think like this so long as he is space-time conscious and space-time bound? (Classification and Communication, S.R. Ranganathan)

Like other examples of paper architecture, there were problems in the actual application of the Colon Classification system. Ranganathan spent years formulating his classification schedule, teaching his ideas to students and personally cataloging thousands of items. His system was essentially linked to his own practice and despite volumes of text, his working model never persisted fully beyond his own activity and direct sphere of influence. Despite the limits of his scheme, Ranganathan’s ideas prefigured digital search mechanisms as information architecture continues to develop an increasingly complex topological structure. The functional compounds of his faceted classification have proven to be a
powerful tool in providing useful, searchable content for catalog records in many widely-used schemes and most major classification systems now include faceted content.

1: HOSPITALITY
2: ∞

Interjected in various places in his writings on classification, Ranganathan expresses an interest in classification schemes and their notation to bear the principle of *infinite hospitality*. The poetic turn in otherwise procedural texts has a strange effect. Seemingly transplanted from an essay on ethics from contemporary continental philosophy, this phrase wedges in between various explanations for notation (assigning a call number) and the flexibility of his classification system. The term *hospitality* is developed in this context as a classification terminology denoting the ability for the scheme to accommodate and remain flexible to new forms, ideas, and elements within its established structure. The idea is embedded in the limitations that Ranganathan found with existing classification schemes and prompted the development of his own faceted scheme. From his perspective, decimal systems and other enumerative systems provided a linear hierarchy in their classification schedule that was not prepared for the *infinite* demands of modernity; considering both the expansions in scholarly and scientific fields and the inclusion of non-Western categories of thought, science and materials. The structure of the Dewey Decimal Classification or the Library of Congress system certainly allowed for additions and expansions, but Ranganathan’s primary intuition was that these systems in their notation did not extend far enough for the breadth of potential knowledge and various extended universes of objects and new fields of knowledge. In his analogy to cartography, he understood these systems as a fixed
map that struggles to properly reorganize new discoveries in a way that still makes the map functional as a tool. In this way, Ranganathan’s allusion to infinite hospitality was a conceptual mandate for the architecture of any classification system — an essential law that affirmed the infinite process of organizing knowledge.

When one is engaged on a problem, the most useful ideas occur suddenly. They seem at once to cast a flood of light over murky tracts of half-formed thought and promise reward to further exploration. This has been my experience and it is doubtless shared by many others. These surprise-ideas present themselves as ready-made wholes, coming at the oddest moments. They seldom come if they are sought and delight in choosing moments when pen and paper cannot be used to impede their flight. They come and whisper in our ears as we lie sleepily in bed, or as we mechanically repeat a long-drawn-out hymn as part of the daily routine of worship. To sit at the study table, with notebook and pen, with the intention of meditating on one’s problem, invariably produces only sleep. (Prolegma to Library Classification, S.R. Ranganathan)

Cover image by Karel Martens